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ABSTRACT

This study flows from a theoretical model that views teachers' careers in the context of a social systems approach. This paper reports an effort to utilize model building to generate research. A discussion is first presented on the process of model building, and a working model of teacher career stages is presented. The model is based on the following phases of a teaching career: (1) pre-service; (2) induction; (3) competency building; (4) enthusiastic and growing; (5) career frustration; (6) stable and stagnant; (7) career wind-down; and (8) career exit. The concerns and characteristics of teachers during each of these phases are described. A discussion is presented on the personal and organizational influences on the teacher's career cycle. Incentives for professional growth are analyzed, and a review is offered of diverse professional delivery modes. The research questions that formed the foundation for this study were derived from the Teacher Career Cycle Model. These questions concerned whether or not there are differences among career stages with regard to: (1) self-reported characteristics of teachers; (2) teacher identified personal and organizational environmental influences; (3) teacher identified appropriate incentives and rewards; and (4) teacher identified appropriate professional delivery models. Implications of the research findings are reviewed in terms of refinement of the Career Cycle Model and future research and practice. A 67-item reference list is included. (JD)

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THE TEACHER CAREER CYCLE: MODEL DEVELOPMENT AND RESEARCH REPORT

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INDIVIDUAL PRESENTATIONS

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Instrumentation and Research Design	Jay Price
Characteristics and Concerns of Teachers in the Career Cycle	Judith Christensen
Personal and Organizational Influences on the Career Cycle	Peter Burke
Incentives for Professional Growth	John McDonnell
Professional Delivery Modes	Jay Price
Summary and Implications	Ralph Fessler

Introduction

In March of 1985, Secretary of Education Terrell Bell made the following statement:

> To attain excellence in education we must attract and hold the best possible talent in teaching. Teaching competes with other important professions for the most able people. In recognizing this, the National Commission on Excellence in Education urged that "salaries for the teaching profession should be increased and should be professionally competitive, market-sensitive, and performance based." The recommendations elaborated further with the following statements: "School boards, administrators, and teachers should cooperate to develop career ladders for teachers that distinguish among the beginning instructor, the experienced teacher, and the master teacher." (p. 16)

The goal of making teaching a more attractive profession for "the best and the brightest" has caused a scramble to find ways of providing incentives and making teaching a profession with more career steps or stages. The terms "master teacher" and "career ladder" are most often associated with efforts to improve conditions in the profession. In order to plan for incentives and career ladders, it is important to look at teachers' careers and what characteristics are present at various stages. If up to 50% of teachers leave the profession after seven years (Metropolitan Life and Affiliated Companies, 1985), what is happening to cause them to abandon teaching as a profession? What professional incentives are appropriate at various stages to keep good people in the classroom?

Meeting individual needs to increase the effectiveness of instruction is a value accepted by virtually every educator. This premise has changed teacher/student ratios, published materials, government spending patterns, parent involvement, special education programs, and certification laws. A

great portion of our education dollar is spent trying to meet individual needs of students. What happens, however, when teachers become students? Are their individual needs assessed and met in professional development programs? Do needs change as teachers mature in life experiences and in their careers? How can professional development programs be tailored to meet these changing needs? How can professional development provide rewards and incentives to teachers at various career stages?

In the last ten years, interest in professional development has increased. This interest is partly attributable to declining enrollments and the concomitant increase in the seniority of the teaching force. Since fewer new teachers are entering the work force, pre-service education may no longer be a major means for stimulating school change. Government intervention in education has tied support money to school change and new programs are dependent upon teacher implementation. Changing cultural and ethnic patterns require new teacher skills as do changing family structures and life styles. Technology has caused tremendous pressure for professional development programs as have public outcries for accountability and greater teacher competence.

School districts, private foundations, and the government have allocated substantial sums of money to support professional development for educators. Legislatures and education agencies across the nation are responding to recommendations made in the report of the National Commission on Excellence. There is a need to be certain that the funds that are expended for professional development will provide the most benefits possible. One way of assuring this is to understand teachers' needs and provide for their individual differences. Floden & Feiman (1981) believe that there is a need to look at how teachers change throughout their careers.

> Teacher educators and educational researchers share a desire to improve elementary and secondary school education. Since teachers make a difference in education, one promising way to improve education is through changes in teachers. The ways in which changes can be effected, however, are poorly understood. Many educators and researchers believe that a better understanding of patterns of teacher change would suggest means for producing or fostering desired changes (p. 1).

Sykes (1983) states that "career stages and differential rewards encourage workers to defer gratification and to maintain effort. An unstaged career which provides a uniform reward schedule based on seniority cannot command continued commitment" (p. 28).

Focus of Paper

This study flows from a theoretical model developed by the researchers that views teachers' careers in the context of a social systems approach. This paper reports an effort to utilize model building to generate research. In the sections that follow, the process of model development is described, a working model of teacher career stages is presented, and research data generated by the model constructs are reported. Finally, implications of the research findings are reviewed in terms of refinement of the career cycle model and future research and practice.

The Process of Model Building

The process of model building that was utilized in this project is described in Figure I. This process is a synthesis of the works of numerous authors who have presented views of model building in the social sciences (Babbie, 1973; Conant, 1951; Denzin, 1978; Griffiths, 1959; Halpin, 1958; Knezevich, 1975; Kerlinger, 1973). The first step in the process is to gather data that presents a view of the "real world." For this project, this view refers to an observation of the world of teachers' careers. Data sources used

to develop this view included observing common practice in natural settings, interviewing teachers, analyzing emerging problems and issues, and reviewing the literature. All of these methods were utilized in the development of the teacher career cycle model, including interviews of 160 teachers and a comprehensive literature review (Christensen, et al., 1983).

Insert Figure I here

Based on a synthesis of data collected, an explanation of the real world of teacher careers was hypothesized into a "working model" (Burke, Fessler, and Christensen, 1984; Fessler, 1985). This working model is described in the next section of this paper.

This model building phase of theory development requires the synthesis and expansion of prior knowledge into a framework that adds new insights and structures for analysis. The working model developed at this stage should not be viewed as fixed, but rather as a tentative paradigm that offers the current best explanation of existing data. Subsequent data gathered should be cycled back into the model to make modifications and refinements. The research presented in a later section of this paper offers such feedback for modification and refinement of the "Teacher Career Cycle Model."

Given the dynamic nature of model building described above, the working model should serve the dual purpose of providing guidelines for action and a structure for future research. This "guide to action" function provides a framework for practitioners to use the model constructs as a guide in decision making, planning and policy formation. A number of such practical implications and applications exist for the career cycle model, and are presented later in

this paper.

For the researcher, the working model offers a framework for research and further analysis. Model constructs suggest interrelationships among complex phenomena and hypotheses about additional relationships. This provides a scheme to systematically drive research and add to the knowledge base and body of theory in a systematic and interactive way. In the study to be described in this paper, the career cycle model served as the framework for the design of instrumentation, the generation of research questions, and the formation of the research design.

As indicated in Figure I, both the "guide to action" and the "research generation" components of a model should be fed back into the model constructs to provide necessary refinements and modifications. It is through this constant feedback that the knowledge base supporting a model can be expanded and the model itself can be maintained as an evolving framework that is responsive to new data.

The Teacher Career Cycle: A Working Model

Model Development

The process of model building described above and outlined in Figure I was applied to the development of the Teacher Career Cycle Model. Extensive interviews of teachers and a comprehensive literature review provided the "view" of the real world that was then synthesized into a working model. Much of this effort flows from the work in adult development and life stages (Cytrenbaum, 1980; Erikson, 1959; Levinson, et al., 1978; Loevinger, 1976; Sheehy, 1976). In addition, available literature on teachers' career stages was reviewed, including the pioneering work of Fuller (1969) and qualitative

studies reflecting on teachers' careers and professional development (Burden, 1981; Newman, et al., 1980; Peterson, 1978). Also considered were other theoretical models of teachers' career stages (Gregoric, 1973; Katz, 1972; Krupp, 1981; Unruh and Turner, 1970; Watts, 1980).

The model presented here builds upon and synthesizes the existing literature and incorporates data from interviews conducted by the researchers. The model builds upon previous work by offering a comprehensive and expanded picture of the career cycle and by placing the career cycle concept into the context of influences from personal and organizational factors. This approach, which borrows heavily from social systems theory (Getzels et al., 1968; Hoy and Miskel, 1987), presents a view of teacher career cycles that is dynamic and flexible, rather than static and fixed.

Model Components

The model presented in Figure II is an attempt to describe the dynamics of the teacher career cycle. The model offers a view of the career progression process which reflects influences from environmental factors (both personal and organizational). The career cycle itself progresses through stages not in a lock-step, linear fashion, but rather in a dynamic manner reflecting responses to the personal and organizational environmental factors. The components of the model are described in the following sections.

Insert Figure II here

Environmental Components

The teacher career cycle responds to environmental conditions. A supportive, nurturing, reinforcing environment can assist a teacher in the

pursuit of a rewarding, positive career progression. Environmental interference and pressures, on the other hand, can impact negatively on the career cycle. The environmental factors are often interactive, making it difficult to sort out specific influences that impact upon the cycle. In an attempt to sort out the variables, however, the influences may be separated into the broad categories of personal environment and organizational environment.

Personal Environment

The personal environment of the teacher includes a number of interactive yet mutually identifiable facets. Among the variables from the individual personal environment that impact upon the career cycle are family support structures, positive critical incidents, life crises, individual dispositions, avocational outlets, and the developmental life stages experienced by teachers. These facets may impact singularly or in combination, and during periods of intensive importance to individuals, they may become the driving force in influencing job behavior and the career cycle. Positive, nurturing, and reinforcing support from the personal environment that does not foster conflict with career-related responsibilities will likely have favorable impacts upon the career cycle. Conversely, a negative crisis-ridden, conflict-oriented personal environment will likely impact negatively upon the teacher's world of work. The following outline provides illustrations of potential concerns in each of the above facets.

A. Family

1. Internal support systems
2. Role expectations for teacher/family member
3. Financial conditions

4. Size of primary unit

5. Special needs of family members

B. Positive Critical Incidents

1. Marriage

2. Birth of children

3. Inheritance

4. Religious experience

5. Interaction with "significant others"

C. Crises

1. Illness of loved one

2. Death of loved one

3. Personal illness

4. Financial loss

5. Divorce

6. Legal problems

7. Chemical abuse in family

8. Crises of friends or relatives

D. Individual Dispositions

1. Cumulative experiences

2. Interpersonal relations

3. Aspirations and goals

4. Personal values

E. Avocational Interests

1. Hobbies

2. Religious activities

3. Volunteerism

4. Travel

5. Sports and exercise

6. Other activities that provide outlets for needs, frustrations, and aspirations

F. Life Stages

1. Relationship to career

2. Relationship to family

3. Assessment of priorities

4. Projection of life goals

It should be noted that the list and description of facets of the personal environment is not all inclusive. What we are presenting here is an outline of some key components in the personal environment that impact upon the career cycle.

Organizational Environment

The organizational environment of schools and school systems comprises a second major category of influences upon the career cycle. Among the variables impacting here are school regulations, the management style of administrators and supervisors, the atmosphere of public trust present in a community, the expectations a community places upon its educational system, the activities of professional organizations and associations, and the union atmosphere present in the system. A supportive posture from these organizational components will reinforce, reward, and encourage teachers as they progress through their career cycles. Alternatively, an atmosphere of mistrust and suspicion will likely have a negative impact. The following outline reflects some of the concerns in these organizational facets:

A. School Regulations

1. National

2. State

3. Local

4. School based

B. Management Style

1. Atmosphere of trust

2. Inspection vs. support

3. Structure vs. laissez faire

4. Philosophical agreement

C. Public Trust

1. Atmosphere of trust and support

2. Confidence in schools and teachers

3. Financial support

D. Societal Expectations

1. Goals

2. Ethics and values

3. Expectations and aspirations

4. National reports on teachers and education

5. Special interest groups

6. Societal resources for improvement

E. Professional Organizations

1. Leadership

2. Support

3. Professional inservice, support

F. Union

1. Supportive for teacher

2. Advisory relationship with management, school board

3. Pride vs. negativism

Again, it should be noted that the above list is not all inclusive, but rather illustrates key organizational factors that impact upon the career cycle.

Components of Career Cycle

The components of the career cycle are described below.

Pre-Service

The pre-service phase is the period of preparation for a specific role. Typically, this would be the period of initial preparation in a college or university. It could also include retraining for a new role or assignment, either within a higher education institution or as part of an inservice process within the work setting.

Induction

The induction phase is generally defined as the first few years of employment during which time the teacher is socialized into the system and learns the everyday aspects of the job. It is generally a period when a new teacher strives for acceptance by students, peers, and supervisors and attempts to achieve a comfort and security level in dealing with everyday problems and issues.

Competency Building

During this phase of the career cycle, the teacher is striving to improve teaching skills and abilities. The teacher seeks out new materials, methods, and strategies. Teachers at this phase desire to build their skills and are frequently receptive to new ideas, attend workshops and conferences, and enroll

in graduate programs.

Enthusiastic and Growing

Even after reaching a high level of competence, an enthusiastic and growing teacher seeks to continuously progress as a professional. Teachers at this phase love their jobs, can't wait to get to school every day, and are constantly seeking new ways to further enrich their teaching. Enthusiasm and high levels of job satisfaction are key ingredients here.

Career Frustration

This period is characterized by frustration and disillusionment with teaching. Job satisfaction is not present to a high degree, and the teacher reflects upon why he or she is doing this work. Much of what is described in the recent literature dealing with teacher burn-out can included in this phase. While this frustration often occurs during a mid-career period, the increased incidence of similar feelings among teachers in relatively early years of their careers has been observed. There is evidence that this phenomenon is even present among many first year teachers.

Stable and Stagnant

Stable and stagnant teachers have resigned themselves to putting in "a fair day's work for a fair day's pay." These teachers are doing what is expected of them, but little more. They may be doing an acceptable job, but are not committed to the pursuit of excellence and growth. These teachers are often going through the motions to fulfill their terms of contract.

Career Wind-Down

This phase describes the conditions present when a teacher is preparing to leave the profession. For some, it may be a pleasant period, reflecting upon positive experiences and anticipating a career change or retirement. For

others, it may reflect a bitter period, one in which a teacher resents forced job termination, or, alternatively, can't wait to get out of an unrewarding job.

Career Exit

This phase represents the period of time after a teacher leaves the job. It may reflect the period of retirement after many years of service, unemployment after voluntary or elective job termination, or a temporary career exit for child rearing or alternative career exploration.

Summary

The model outlined above reflects the authors' synthesis and integration of the existing available data into an explanation of the "real world" of teacher careers. It presents a series of structures that can be further studied and developed. As suggested in the model building process described earlier and outlined in Figure I, the career stage model should not be viewed as fixed, but rather as a dynamic, working explanation of the real world that must be subjected to refinement and modification as new data are fed back into the process.

From Model Building to Research Design

Also outlined in Figure I is the use of a model to generate research. This application provides a framework for research that flows from theoretical constructs and adds to the general data base, assists in defining appropriate guides to action, and provides feedback to refine and modify model constructs. The research design and instrument development reported in the next section of this paper were driven by the constructs in the Teacher Career Cycle Model, and the data collected is being used to provide feedback for model modification and refinement.

The Research

The major thrust of the study was to gather data to test the constructs of the Teacher Career Cycle Model and to explore implications for professional development programs and rewards and incentives for teachers at various stages of their careers.

Research Questions

The research questions that formed the foundation for this study were derived from the Teacher Career Cycle Model. These were:

1. Are there differences among career stages with regard to self-reported characteristics of teachers ?
2. Are there differences among career stages with regard to teacher identified personal and organizational environmental influences?
3. Are there differences among career stages with regard to teacher identified appropriate incentives and rewards?
4. Are there differences among career stages with regard to teacher identified appropriate professional development delivery modes?

Instrument Development

In order to address the research questions it was necessary develop a series of instruments. This development is briefly described here and reported more fully in Price (1986), together with factor analyses and alpha reliability coefficients.

To respond to the first question, two instruments were developed. The first was the Self-Selection of Career Stages (SSCS) instrument. The SSCS consisted of eight descriptive paragraphs corresponding to eight facets of the career cycle model. These descriptions were composites based on an extensive review of the adult development and teacher career literature, as well as interviews with teachers (Christensen, et al., 1983). The descriptions in the

SSCS are very similar to those reported on pages 11-12 of this paper. Respondents read each description and selected the description which most closely corresponded to their present career phase. During initial pilot testing, respondents indicated little trouble identifying their career phase, but many objected to the several labels identifying certain career phases. In subsequent use, labels were deleted from the descriptions and no further problems in use were reported.

The second instrument designed to respond to research question one was the Teacher Career Cycle Inventory (TCCI). The TCCI was developed in a two-stage process. Practicing teachers enrolled in graduate classes at four institutions responded to the self-selection paragraphs and then wrote statements describing why they had selected a particular career stage. These statements were coded according to career stage, categorized by similarity, and edited, yielding 107 statements for pilot testing. Respondents were to indicate, on a five-point scale, the accuracy of each statement's description.

Following pilot testing, TCCI items were submitted to an item screening process using analysis of variance and common factor-factor analysis. In this process, each item served as the dependent variable with Self-Selected Career Stage as the independent variable. To be included in the final version of the TCCI, each item (1) obtained a significant difference among the SSCS groups at or beyond the $p = .10$ level, and (2) obtained a relatively high loading on a single factor after a varimax rotation of the factor matrix. This process reduced the number of TCCI items from 107 to 58. Of these items, 24 were items generated by teachers at a single career stage while 34 items were generated by teachers in more than one of the career stage groups.

Additional information about characteristics of teachers at various career

stages was obtained though demographic information requested in the survey.

To respond to the second research question, the Personal/ Organizational Influences Inventory (P/OII) was developed to assess respondents' perceptions of current personal and organizational influences on their careers. Instrument items were drawn from the literature and from the experience of the researchers involved in this project (Burke & Heideman, 1985). Respondents indicated the extent of positive or negative influence for each item using a seven-point scale. An earlier draft and testing of this approach (Burke, et al., 1983) established that teachers perceived positive and negative personal and organizational influences on their careers which were in part related to their years of teaching experience.

Following pilot testing, the P/OII items were submitted to the same screening process used with TCCI which reduced the number of items from 67 to 56.

To examine the preferred incentives of teachers at various career stages, research question three, the Teacher Incentives Inventory (TII), was developed. The TII consisted of forty-six incentive items drawn from the literature on existing and recommended types of incentives as well as from the researchers' experiences. The items covered intrinsic, extrinsic, autonomy, and conditions of the workplace categories of incentives. Respondents indicated both the availability of each stated incentive in their settings and the appropriateness of the incentive for themselves. Two five-point scales were used. Respondents also listed the three incentives that were most and least important to them.

The final instrument developed was the Professional Development Delivery Modes Inventory (PDDMI). This instrument, which was designed to respond to research question four, consisted of seventeen items drawn from the literature

on existing and recommended activities as well as from the researchers' experiences with professional development activities. The delivery modes included activities such as university coursework, workshops, exchange teaching, and conference attendance. Respondents indicated both the availability and the appropriateness of each item using two five-point scales. Respondents also listed the three modes or activities which were most and least important to them.

Although the same screening procedure used above was again used to analyze the TII and PDDMI responses, no items were eliminated since their content was believed to represent the range of incentive and delivery mode options generally available to teachers in the public schools. To determine the psychometric characteristics of these instruments only the "appropriate" scale responses were analyzed.

Sample

Three thousand six hundred teachers were systematically random sampled from a market survey firm's master list of approximately 1,500,000 teachers in the United States. This group was randomly divided into seven groups of teachers, 1200 of whom received all the instruments while the six remaining groups of 400 each received various sets of four instruments (e.g., the demographic sheet, the SSCS, and two of the remaining instruments). Thus, each instrument was paired with every other instrument and it was possible to assess the effects of instrument length with respect to return rates.

The total number of returns was 778 (21.6%) with the highest group rate of 27.8% and the lowest at 19.3% for the group receiving all instruments.

Analysis

The first research question, relating to differences among career stages with regard to self-reported characteristics of teachers, was addressed in two analyses relating to the validity of the Teacher Career Cycle Model. The Self-Selection of Career Stage (SSCS) categories served as an independent variable and the responses to the Teacher Career Cycle Inventory (TCCI) as the dependent variables in a multivariate analysis of variance. This analysis was then followed by a discriminant function analysis to determine the dimensions and similarities among teachers at various stages of their careers given their reported characteristics on the TCCI. This process was repeated for question two, but in this case the Personal/Organizational Influences Inventory (P/OII) was used in place of the Teacher Career Cycle Inventory (TCCI) for identifying dependent variables.

The remaining questions were addressed with the same types of analyses described above. For these questions, however, the "appropriate" ratings from the Teacher Incentives Inventory and the Professional Development Delivery Modes Inventory served as the dependent variables, and the categories of the SSCS as the independent variable.

Results

Research Question One: Are there differences among career stages with regard to self-reported characteristics of teachers?

A. Table 1 contains the basic demographic information about the respondents in this study while Table 2 contains the proportions of teachers at the various career stage levels on the Self-Selection instrument. The profile of these characteristics indicates that the typical teacher in this study is about 41 years of age and has attained about 16 years of experience in

education, with nearly 11 years spent in the present position. The typical teacher is most likely to be a married female, employed at the elementary level in a rural or small city location in a district having 2,000-5,000 students. This teacher is as likely to have a bachelor's degree as a master's degree, is affiliated with the NEA, and holds classroom teaching as a career goal. The teacher rates her career stage as enthusiastic and growing.

Insert Tables 1 & 2 here

B. Table 3 contains the results of the step-wise discriminant analysis on the Teacher Career Cycle Inventory (TCCI). For this analysis and all subsequent analyses Preservice teachers were combined with Induction teachers, and Career Exit teachers were combined with Career Wind-Down teachers due to small group sizes.

Insert Table 3 here

From this table it is apparent that the various career stage groups differ from one another along four significant dimensions. The coefficient of discriminating power (Tatsuoka, 1970) indicated that 78% of the variance in discriminant space was attributable to differences among the career groups' responses. Significant univariate results are indicated by an asterisk for each item.

The function coefficients, which identify those items of greatest disagreement among the groups, together with the group means, indicate that the first function identifies teaching enthusiasm. On this function, groups 1, 2,

and 3 have relatively higher levels of agreement that deciding what to teach is exciting (#1), they have a lot to learn about teaching (#5), and they are enthusiastic about teaching (#49). The remaining groups (#4, 5, and 6) indicate that statements about increasing difficulty with being enthusiastic (#6), frustration (#9), and discouraging academic climate (#58) tend to be descriptive of them.

The second function, based on the coefficients and group means, appears to identify differences in characterizations of interactive teaching skills. The first three groups tend to report at relatively higher levels that they strive to improve teaching skills (#43), enjoy students' responses to their teaching (#51), have a lot of energy (#14), and have a lot to learn about teaching (#5). The other three groups report, in relative terms, that they are less comfortable with what they teach (#50), provide fewer opportunities to meet with parents (#45), and enjoy their colleagues somewhat less (#32).

The third function discriminates among the groups in terms of differences in levels of attitudes towards students and teaching. Groups, 1, 2, 5, and 6 tend to express at relatively higher levels that they are discouraged by academic climate (#58), enjoy the students (#37), would like to teach part-time (#35), and have more difficulty with enthusiasm (#6). Groups 3 and 4, on the other hand, tend to report at relatively higher levels that administration does not want to hear teachers' problems (#24) and that there are few rewards for professional efforts (#46), and that they have established rapport with students (#21) and are enthusiastic about teaching (#49).

The fourth function discriminates among groups based on differences in attitudes towards teaching as a profession. On this function, groups 3 and 6 express at relatively higher levels that they try to improve their teaching

skills (#43), enjoy their colleagues (#32), are involved in curriculum development (#15), and reflect on their teaching careers with pride (#2). On the other hand, groups 1, 2, 4, and 5 indicated that they were not so optimistic about teaching (#29), tended not to enjoy students as much (#37), and were not as comfortable or secure as a result of experience (#20).

In general, this analysis indicates that self-reported characteristics of teachers are related to teachers' self-reported career stages in at least four ways or dimensions which include teaching enthusiasm, interactive teaching skills, students and teaching, and teaching as a profession. In general, these differences indicate that the first three career stages report higher levels of enthusiasm and teaching skill concerns as well as more concern for students, while the latter three stages show higher levels of concern for those aspects of teaching which are bureaucratic or debilitative in the occupation.

To determine more exactly where the differences lay between groups, individual function scores were computed and analyzed in a univariate analysis of variance with self-reported career stage as the independent variable. As in the preceding analysis, the Pre-service teachers were combined with Induction teachers, and Career Exit teachers were combined with Career Wind-Down teachers due to the small numbers in these groups.

Insert Table 4 here

The results, displayed in Table 4, indicate that, in general, the career stages of Stable and Stagnant, Frustration, and Wind-Down/Exit are less positive in their self-characterizations than the Induction, Competency Building, and Enthusiastic/Growing stages. Yet, as is indicated by the paired

tests, there are significant pair-wise differences in these levels of characteristics. On Function I, Career Wind-Down teachers are more like Induction level teachers in their enthusiasm and less like the Stable and Stagnant or Frustrated teachers. Similarly, significant differences were obtained among the Induction vs. Enthusiastic/Growing and Competency vs. Enthusiastic/Growing groups on the first and fourth functions.

What these pair-wise results suggest, overall, is the validity of at least a six-stage model of teachers' careers in terms of their different characteristics. At this point, because of the nature of this survey, no causal attributions can be made for these pair-wise differences.

Research Question Two: Are there differences among career stages with regard to teacher identified personal and organizational environmental influences?

Table 5 contains the results of the step-wise discriminant analysis on the Personal/Organizational Influences Inventory. As in the preceding analysis, Preservice teachers were combined with Induction teachers, and Career Exit teachers were combined with Career Wind-Down teachers due to the small numbers in these groups.

Insert Table 5 here

From this table it is apparent that the various career stage groups differ from one another on three significant dimensions. The coefficient of discriminating power (Tatsuoka, 1970) indicated that 53% of the variance in discriminant space was attributable to differences among the career groups'

responses.

The function coefficients, which indicate the items of greatest disagreement among the groups, together with the group means, indicate that the first function discriminates on the basis of personal needs and goals. In relative terms, career groups 1-3 tended to report higher levels of influence for principal's support (#10), personal goals and aspirations (#21), drive to fulfill personal needs (#44), and union relationship with management (#14). On the other hand, again in relative terms, groups 4-6 reported more influence for principal's management style (#43), need for security (#51), and travel (#3).

The second function, given the coefficients and group means, appears to discriminate among groups on the basis of acceptance by administration and community. Groups 1 and 3 reported relatively higher levels of influence of philosophic agreement with the principal (#22), relationships with friends (#30), societal expectations (#9), and volunteer activities (#5). The latter four groups, on the other hand, reported relatively lower negative levels of influence for principal's support of teachers (#10), union relationship with administration (#14), previous work (#15), family finances (#27), a family member's substance abuse (#34), and need for community acceptance (#42).

The third function, given the coefficients and group means, appears to discriminate on the basis of extrinsic support mechanisms. For groups 2 and 3, the influence of principal's management style (#43), family expectations (#35), non-union professional association support (#18), and research on effective teaching (#19) held relatively higher levels of influence. On the other hand, groups 1, 4, 5, and 6 reported relatively higher levels of influence for previous work (#15), family finances (#27), and personal relations with friends (#30).

In summary, this analysis indicates that differences in teachers' reports about influences on their careers are related to their self-reported career stages in at least three ways or dimensions. These dimensions include personal needs and goals, acceptance by management and community, and extrinsic support mechanisms. In general, the results indicate that teachers within stage groups 1-3 report higher positive levels of influence for personal needs and goals, acceptance, and importance of support organizations. Stages 4-6, however, exhibit somewhat lower levels on these "needs and influences" dimensions to the point where administrative influences are perceived as negative.

To determine more exactly where the differences lay between groups, individual function scores were computed and analyzed in an univariate analysis of variance with the self-reported career stage as the independent variable.

Insert Table 6 here

The results, contained in Table 6, indicate that, as in the TCCI, stages 4-6 differ from stages 1-3. For example, the reported influence of personal needs and goals, Function 1, is greater for the Induction, Competency, and Enthusiastic/Growing stages, compared to the Stable and Frustrated stages, yet these first stages do not differ among themselves. It also appears that the Career Wind-Down group is more similar to the first three stages in these influences than to the Stable and Frustrated groups.

Stages 1-3 also reported higher levels of influence on both Functions II and III, the Acceptance and Extrinsic Influences, than stages 4-6 although they do not differ among themselves. Also on these functions the Stable, Frustration, and Wind-Down stages also do not differ among themselves.

One interpretation of these pair-wise results suggests that there may only be a two- or three-stage model of teachers' careers in terms of the differences in influences on their careers. An alternative possibility is that questionnaire-survey methodology may be too insensitive to the types and importance of the various influences on teachers' careers. An additional possibility is that while there may indeed be six or eight stages of teachers careers, several stages have similar profiles with regard to environmental influences.

Research Question 3: Are there differences among career stages with regard to teacher identified appropriate incentives and rewards?

To answer this question, the items in the Teacher Incentives Inventory were analyzed in combination using discriminant analysis and singly using univariate analyses of variance with career stage as the independent variable. The results of the discriminant analysis are presented here while the univariate results are indicated by an asterisk on those nine items for which significant group differences were obtained.

Insert Table 7 here

Table 7 contains the results of the step-wise discriminant analysis on the TII. In this analysis, four significant discriminant functions were obtained. The omega coefficient indicated that 45% of the variance in discriminant space was attributable to differences among the career groups' "appropriate" ratings.

Interpretation of these functions, given the standardized coefficients and group means, indicates that the first function discriminates based on group

differences in ratings of teaching incentives. In general, career groups 1-3 are relatively higher on the items relating to extra work (#24), loan forgiveness (#32), professional advancement (#38), and control of instructional decisions (#43). On the other hand, groups 4-6 tend to rate at relatively higher levels the appropriateness of promotion to administration (#13), early retirement options (#27), and released time for professional activities (#37).

On the second function, discrimination among the career groups appears to be based on differences in ratings of concrete incentives. For groups 6, 2, and 3 designation as master teacher (#4), written praise (#9), longer day/year with pay (#28), and leadership opportunities (#21) tended to elicit higher than average ratings. However, for groups 4 and 5 aide support (#18), physical environment (#22), loan forgiveness (#32), and professional advancement opportunities (#38) tended to elicit relatively higher ratings.

The third function appears to discriminate based on praise and support incentives. Groups 5 and 3 tended to have relatively higher levels on organizational recognition (#7), written praise (#9), support for research (#36), and extra work options (#24). On the other hand, groups 4, 6, 1, and 2 tended to have relatively higher levels on student praise (#12), administrative promotion (#13), loan forgiveness (#32), and instructional decision making (#24).

On the fourth function, discrimination among groups appears to be based on praise and recognition. For groups 1, 2, and 5, verbal praise (#8), leadership opportunities (#21), and flexible workday (#29) received relatively higher ratings, while among groups 3, 4, and 6, promotion to administration (#13), written praise (#9), and praise from students (#12) tended to receive relatively higher ratings.

In general, this analysis indicates that incentives among teachers are differentially related to their career stage in at least four ways which include teaching incentives, concrete incentives, praise/support incentives, and praise/recognition. What is important about this analysis is that of the 46 items included, only 9 items approached the traditional levels of significance in a univariate analysis. The discriminant analysis, however, increased the discriminating power of the item set and increased the number of items.

In general, it appears that stages 4-6 rate appropriateness of incentives at lower levels than do stages 1-3. However, it is apparent from the group means that this is not a constant phenomenon and that at times the pre-service/induction group may appear similar to other stages, as in functions 3 and 4.

To determine more precisely where pair-wise differences occurred, individual discriminant scores were calculated and submitted to a univariate analysis of variance. These results are displayed in Table 8 and, in general, indicate that stages 4-6 differ very little from stages 1-3 in terms of reward preferences.

Insert Table 8 here

Only on function 1 do the differences clearly distinguish the first three stages from the Frustrated, Stable and Stagnant, and Wind-Down stages. Thus, in terms of the Career Cycle Model, these results indicate that only a two- or three-stage model might be needed to account for differences in rated appropriateness levels of the various incentives. As indicated in previous

comments, these results may be a function of the questionnaire methodology being insensitive to the meanings and importance that teachers place on these incentives at their various career stages, or to the simple notion that teachers at different career stages have similar incentive preference profiles.

Research Question 4: Are there differences among career stages with regard to teacher identified appropriate professional development delivery modes?

To answer this question the "appropriate" responses on the Professional Development Delivery Modes Inventory were initially analyzed using discriminant analysis. This analysis indicated that only 19% of the variance in discriminant space was attributable to career group differences. Since this percent was relatively low, univariate analysis on each of the items was performed followed by the Scheffe-range test to determine among which pairs of means the group differences lay. These results are presented in Table 9.

Insert Table 9 here

The results of these univariate analyses indicate that the differences on only 7 out of the 17 items approached traditional levels of significance. For 2 of these 7 items, the conservative Scheffe procedure produced no pair-wise significant differences between group means. The remaining 5 items, however, did obtain significant pair-wise comparisons. In these instances, the teachers at the Competency Building stage rated, at higher levels of appropriateness, university coursework, university-conducted workshops, classroom visitation, conference attendance, and staff meetings. These higher ratings contrasted

with the lower ratings given these items by the other career stages.

In general, therefore, the differences in teachers' ratings of appropriateness of the 17 PDDMI items tended to be, at best, only slightly related to differences in self-reported career stages. In statistical terms, this is revealed by the average eta coefficient (the ratio of between groups sum of squares to total sum of squares) equal to .026 across the 17 items or roughly 3% of the variance.

Summary and Implications

In general, the analyses reported here have determined that teachers' self-characterizations of their careers and the sources of influence on them are multidimensional in nature and differ according to the career stage that teachers report themselves to be in. These differences in characteristics were associated with enthusiasm, teaching skills, interaction with students, and attitude toward the occupation. With respect to influences on careers, the differences found were related to community/administrative acceptance, personal goals/needs, and extrinsic influence mechanisms. In terms of incentive preferences related to career stages, teachers differed in perceived levels of appropriateness relating to monetary, security, praise, and perquisite types of incentives. In terms of development delivery modes, the main aspect differentiating teachers at various career stages was the appropriateness of university/off-site experiences vs. locally developed on-site experiences.

In terms of actual career stage differences, career stages 4-6 tended to respond at lower, less positive levels on the named dimensions in contrast to stages 1-3 which tended to be at higher, more positive levels. This tendency, however, was not consistent across all dimensions; for example, on certain

dimensions, the Career Wind-Down teachers were at levels similar to Induction level teachers.

Feedback into Model Constructs

The results of this research support a number of the constructs presented in the Teacher Career Cycle Model (Figure II). First, this work adds to the literature on teachers' careers by supporting the model's contention that there are more than the two or three career stages that were reported in earlier analyses (e.g., Burden, 1981; Krupp, 1981; Katz, 1972; Unruh & Turner, 1970). It also supports the notion that attitudes towards teaching, students, and schools change as teachers enter different stages. Furthermore, these attitudes and characteristics are multidimensional in nature; there is no single attitude that characterizes teachers, but rather underlying dimensions along which attitudes and perceptions of influence lie.

Second, this work and the results suggest that the social systems approach proposed in the Teacher Career Cycle Model is an appropriate framework from which to view occupational characteristics. Though the work here reports nothing about causal flow analysis which would support the social systems approach, the results reported do support the informational constructs generated by the model. These constructs are necessary though not sufficient evidence for the validity of the social systems model proposed to account for teachers' careers.

One possible modification of the career cycle model is suggested by some of the reported data. The similarities among clusters of stages with regard to environmental influences, appropriate incentives, and appropriate delivery modes suggest that the eight or six stages may be collapsed into two or three for some units of analysis. Perhaps a functional approach could be to consider

an "emerging, growing period," a "leveling, stable period," and a "frustrated, declining period." The picture here is not at all clear, and more research is needed to explore this and related options.

Generation of Research and Guide to Action

As indicated in Figure I and the supporting narrative, model constructs should provide a framework for future research as well as a "guide to action" to assist practitioners in decision making, planning, and policy formation. Implications of this model-driven research can be applied to both future research and guides for practitioners.

Implications for Research

Numerous implications exist for additional research. One immediate need is to attempt to replicate this study with additional follow-up procedures to stimulate a larger response rate. The small return reported earlier in this paper severely limits the generalizability of the results.

There is a need as well to complement these data with external perceptions of teachers' career stages. The instruments developed in this study should be adapted to solicit perceptions from peers, principals, parents and students. Comparing data from these alter perceptions would provide a rich basis for further analysis.

It would be valuable as well to complement these data with carefully selected case studies and teacher interviews. These qualitative procedures could add considerable depth to these reported results and could yield additional feedback into the model constructs.

The model constructs and instruments developed in this study could be used to explore other factors that might be related to, or have an impact on, teacher career cycles. It would be interesting, for example, to examine the

relationship between teacher career stages and variables such as teacher cognitive maturity, teacher locus of control, teacher value systems, teacher dogmatism, the organizational climate of schools, teacher or principal leadership traits, and student performance. The examination of these and related questions would add greatly to the understanding of teachers' careers and would provide valuable feedback for modification and refinement of the Teacher Career Cycle Model.

An additional line of needed research would be to apply the model and adapt the instruments to explore the career cycles of alternative role incumbents (e.g., principals, counselors, professors, superintendents).

Implications for Practice

The most important implication of this research for practitioners is the substantiation of the existence of teacher career stages. Teachers in preparation should find this information both valuable and usable in their careers. The first step in solving any problem is the recognition that a problem exists. If teachers (or student teachers) see some of the characteristics of the negative stages in their work, this recognition should lead to the design of steps to be taken to move into a more positive stage. Supervisors could assist in this process by stimulating awareness and offering support. Characteristics of teacher enthusiasm, interactive teaching skills, attitudes toward teaching and toward students, and impressions of the teaching profession, are all measurable through the TCCI. These characteristics serve as a measure of an individual's career stage. Pre-service, induction, and inservice teachers all have specific needs and attitudes that are described in this research.

Another important finding from this research project for teacher education

is the linking of career stage to appropriate incentives and the coupling of staff development program delivery techniques to incentives and to career stage. Incentives in both the financial and nonfinancial categories that are selected as appropriate by teachers at different stages have implications for teacher educators who plan long-range staff development programs. It is important to know which teachers react positively to praise and support, which need concrete incentives, and which respond to money and security items only.

The design of staff development programs exists beyond the selection of teacher incentives. Professional growth experiences can be designed in several ways, from formal classroom instruction to independent professional reading. This research aligns the most appropriate techniques for teachers with their self-selected career stages. Staff development program providers may find this alignment very valuable in planning the design and implementation of programs. It is crucial to know the audience and to put a program together that meets the needs of that audience for it to be successful. This research gives direction to such an individualized approach.

An additional implication for teacher educators from this research is the isolation of the teacher induction period as a specific stage in the professional growth of a teacher. Attitudes are positive at this stage, but many needs exist. Teacher induction has been studied by several teacher educators over the past few years. The results of this study support and expand upon that previous work.

The results given here support the current movement toward career-long teacher education that involves significant consideration of induction, renewal, and redirection activities. Many teacher educators and staff developers are aware of the need to fine tune preservice preparation, are

designing means to meet the needs of beginners, and are involved in the development of programs for career teachers. This research provides data that support a career long approach to teacher professional growth.

If the work in teacher career stages is to go beyond the "interesting to know" level and have an impact upon the educational scene, there must be appropriate organizational and supervisory responses. Several authors have addressed this issue (for a summary see Christensen et al., 1983a, pp. 15-22).

Some additional observations drawn from the career cycle model are summarized below:

--The traditional inservice and professional growth activities that emphasize improved teaching skills are appropriate at certain points in a teacher's career, particularly during the skill building periods associated with the induction and competency building phases, and during the enthusiastic and growing period.

--The concept of staff development and professional growth should be broadened to include concern for the personal needs and problems of teachers. This might include support systems to assist teachers in dealing with family problems, chemical abuse, financial planning, and crisis resolution. Larger school districts must examine means for internal support systems for such purposes, while smaller districts could explore linkages to existing social service agencies.

--Organizational policies should be examined to provide support for teachers at various phases of the career cycle. Organizational responses to varying teacher personal needs should include liberal sabbatical policies, modifications in job assignments, job-sharing, liberal leave of absence policies, and other procedures that might give teachers the opportunity to

explore career alternatives and pursue solutions to personal problems.

--Approaches to staff development and professional growth that advocate personalized, individualized support systems should be emphasized. In searching for such models, particular attention might be given to the work of Sergiovanni and Starratt (1979); Herzberg (1959); Bents and Howey (1981); Edelfelt and Johnson (1975); Fessler and Burke (1983); and Glickman (1981).

In summary, the career cycle concept suggests a need to view professional growth and staff development in a comprehensive manner. While the traditional skill building approaches are appropriate at certain points in a teacher's career, there is a need to go beyond this view in order to consider the personal needs of teachers and organizational practices that impact upon teacher performance.

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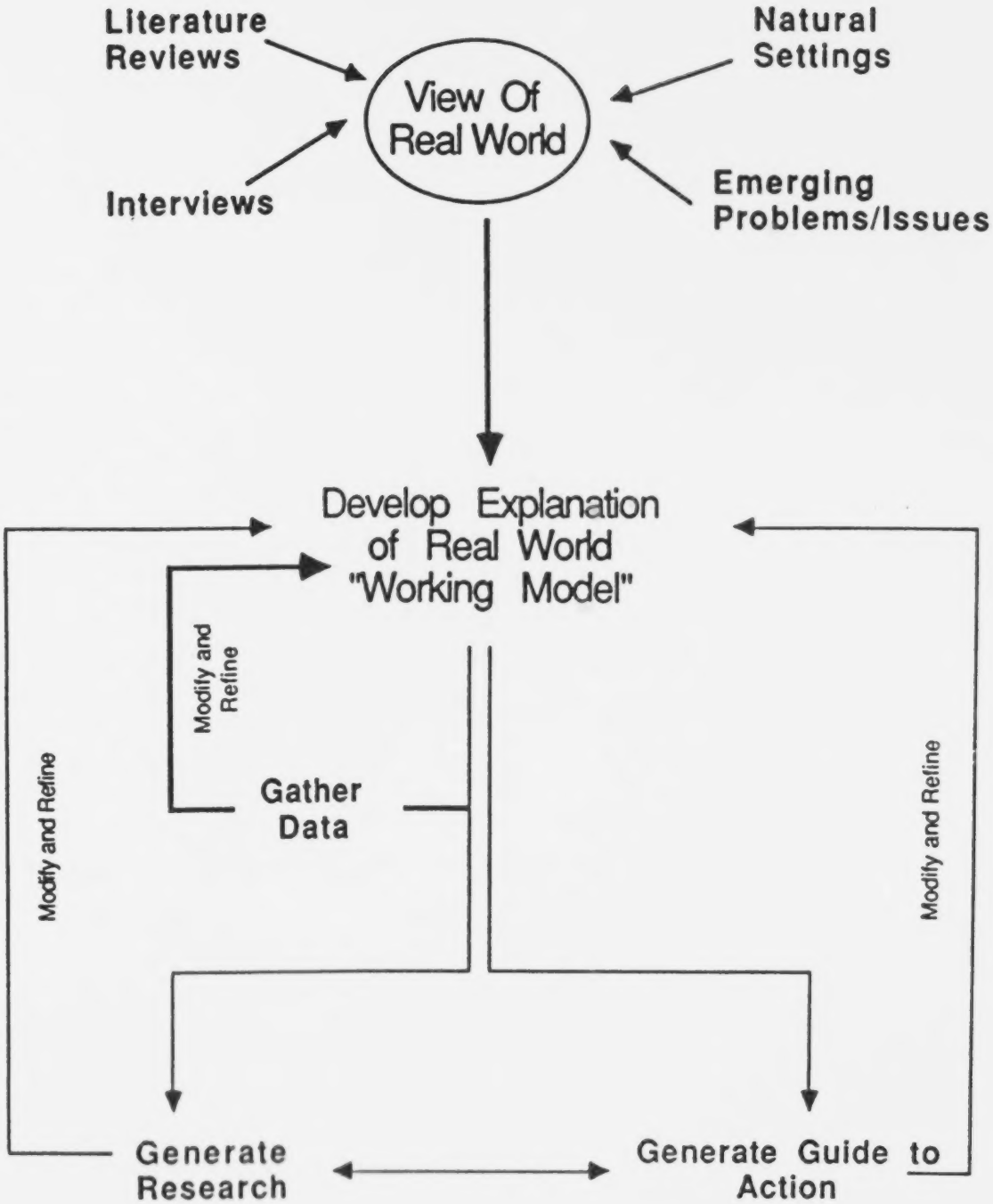
Figure I

Model Building



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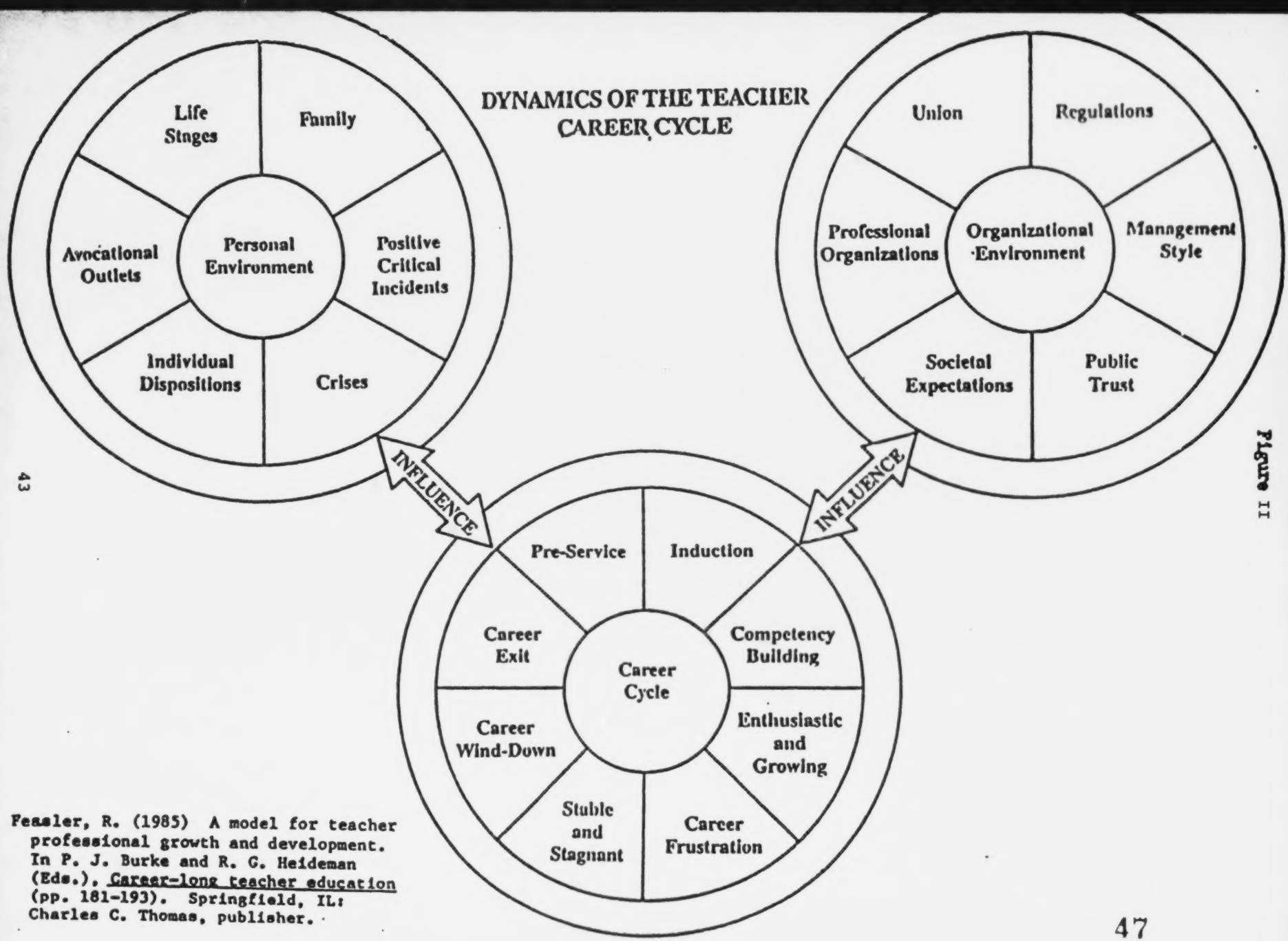

Figure II

Feasler, R. (1985) A model for teacher professional growth and development. In P. J. Burke and R. G. Heideman (Eds.), Career-long teacher education (pp. 181-193). Springfield, IL: Charles C. Thomas, publisher.

TABLE 1

Demographic Characteristics of Sample

Age	x = 41.4	s.d. = 9.3
Years Experience	x = 15.8	s.d. = 8.2
Years in Position	x = 10.7	s.d. = 8.1

Gender

Male = 243(31.2%) Female = 531(68.3%)

Marital Status

Married = 567(72.9%) Unmarried = 200(25.7%)
No Response = 11(1.5%)

Teaching Assignment

Elementary = 327(42%) Middle-Jr. High = 197(25.3%)
High School = 210(27%) Other = 44(5.6%)

School Location

Urban = 60(7.7%) Rural = 254(32.6%)
Suburb = 199(25.6%) City = 242(31.1%)
No Response = 23(3%)

District Size

0-499 = 83(10.7%) 500-999 = 96(12.3%)
1000-1999 = 141(18.1%) 2000-4999 = 185(23.8%)
5-10,000 = 100(12.9%) Over 10,000 = 125(16.1%)
No Response = 48(6.2%)

Highest Ed. Level

Bachelors = 326(41.9%) Masters = 327(42%)
Ph.D. = 10(1.3%) Postmasters = 86(11.1%)
Other or No Response = 29(3.7%)

Organizational Affiliation

AFT = 77(9.9%) NEA = 464(59.6%)
None = 168(21.6%) Other = 61(7.8%)
No Response = 8(1%)

Career Goal

Team Leader/Chair = 86(11.1%) Teacher = 480(61.7%)
School Adm = 62(8%) Other = 135(17.4%)
No Response = 15(1.9%)

TABLE 2

Proportions from Self-Selection of Career Stages

Label		Frequency	%
1	Preservice	8	1.0
2	Induction	29	3.7
3	Competency Building	159	19.8
4	Enthusiastic & Growing	375	48.2
5	Stable and Stagnant	49	6.3
6	Career Frustration	78	10.0
7	Career Wind-down	59	7.6
8	Career Exit	3	0.4
No Response		23	3.0
		778	

TABLE 3

Standardized Discriminant Function Coefficients and Group Means for the Teacher Career Cycle Inventory

		Teaching Enthusiasm	Interactive Teaching Skills	Students and Teaching	Teaching as a Profession
		I	II	III	IV
* 1.	It is exciting to decide what I'm going to teach.	.22			-.22
* 2.	I reflect on my teaching career with pirde.			.28	.29
* 5.	I still have a lot to learn about teaching	.23	.23		
* 6.	Each year it becomes increasingly difficult to be enthusiastic about teaching.	-.30		.44	.24
* 7.	I attend to students' individual needs.				.23
* 8.	I would be happier doing something other than teaching.		.36		
* 9.	I am frustrated.	-.36		-.25	
*11.	I enjoy teaching and look forward to going to work every day.				
*14.	I have a tremendous amount of energy.		.25	.28	
*15.	I am involved in curriculum development.				.37
*16.	I am respected by my students.	-.22			
*17.	Graduate coursework has helped me as a teacher.				
*18.	I try to make each day better than the one before.				.21
*20.	I am gaining comfort and security through experience.				.32
*21.	I have established rapport with my students.	.20		-.33	
*22.	I supervise student teachers/interns.		-.25		.27
*24.	Administration does not want to hear problems of teachers.			-.35	
*25.	I am willing to try new ideas and teaching strategies.		.23	.21	
*26.	I have made a positive change in my teaching assignment.			-.20	
*29.	I am generally optimistic about teaching.				-.43
*30.	I need a push to get me through the doldrums.		.30	-.28	
*32.	I enjoy my colleagues.		-.34		.37
34.	There is not enough budgetary support to purchase instructional materials.				-.22
*35.	I would like to teach part time so I could pursue other interests.			.29	
*37.	I enjoy my students.			.35	-.31
*40.	I dread going to work.		.35		
*43.	I strive to improve my teaching skills.		.51		.47
*45.	I provide opportunities to meet with parents.		-.47	-.31	
*46.	There are few rewards for my professional efforts.			-.32	
*48.	Parents are supportive of my teaching.				
*49.	I am enthusiastic about teaching.	.29		-.29	
*50.	I am comfortable with most of what I teach.		-.50	-.20	
*51.	I enjoy seeing students respond positively to my teaching.		.41		
*52.	I question the competence of decision makes in my school district.				-.20
*53.	I want to learn from other teachers.			-.20	
*58.	The academic climate in my school is discouraging	-.24		.45	

*p< .02

Table 3 (continued)

Function	Eigenvalue	% of Variance	Cum% of Variance	Canonical Correlation	P
1 Teacher Enthusiasm	1.49	65.9	65.9	.77	.000
2 Interactive Teaching Skills	.30	13.2	79.1	.48	.000
3 Attitudes Toward Students & Teaching	.21	9.3	88.4	.42	.000
4 Attitudes Toward Teaching as a Profession	.17	7.6	96.0	.38	.007

omega^2 = .78

Group Means	F 1	F 2	F 3	F 4
1 Preservice & Induction	1.3	.6	1.0	-1.4
2 Competency Building	.4	.4	.3	-.3
3 Enthusiastic & Growing	.6	.4	-.2	.3
4 Stable & Stagnant	-.9	-1.4	-.9	-.9
5 Career Frustration	-2.7	-1.0	.1	-.1
6 Career Wind Down & Exit	-.4	-1.5	.5	.4

F = Function

TABLE 4

Scheffe Pairwise Comparisons of
Group Mean Discriminant Scores on Four Functions - TCCI

*p< .05

Function 1 Means	Group	Teaching Enthusiasm 5	4	6	1	2	3	df 5/514	F 91.3	prob. .00
- 2.7	5									
- .9	4	*								
- .4	6	*								
.3	1	*	*							
.4	2	*	*	*						
.6	3	*	*	*						

Function II Means	Group	Interactive Teaching Skills 6	4	5	2	3	1	df 5/514	F 54.4	prob. .00
- 1.5	6									
- 1.4	4									
- 1.0	5									
.4	2	*	*	*						
.4	3	*	*	*						
.6	1	*	*	*						

Function III Means	Group	Students and Teaching 4	3	5	2	6	1	df 5/514	F 14.9	prob. .00
- .9	4									
- .2	3	*								
.1	5	*								
.3	2	*	*							
.5	6	*	*							
1.0	1	*	*	*						

Function IV Means	Group	Teaching as a Profession 1	4	2	5	3	6	df 5/514	F 19.8	prob. .00
- 1.4	1									
- .9	4									
- .3	2	*								
- .1	5	*	*							
.3	3	*	*	*						
.4	6	*	*	*						

*Groups
1. Pre-service and Induction
2. Competency Building
3. Enthusiastic and Growing
4. Stable and Stagnant
5. Career Frustration
6. Career Wind-Down and Exit

TABLE 5

Standardized Discriminant Function Coefficients and Group Means for the Personal/Organizational Influences Inventory

		Personal Needs and Goals	Acceptance by Adm. and Community	Extrinsic Support Influences
		I	II	III
* 3.	Travel	-.20	.20	
* 5.	Volunteer Activities		.34	
* 9.	Societal expectations for moral and values education		.36	
*10.	Principal's support of teachers	.40	-.37	
*11.	Religious activities			-.28
*12.	Graduate education courses	.26	-.33	
*13.	Special needs of family members	-.15		
*14.	Teacher union relationship with administration and school board	.29	-.45	
*15.	Previous work outside of schools		-.26	-.36
16.	Personal opportunities for union leadership		.27	
*18.	Support for teachers by professional associations (not union)			.61
*19.	Research on effective teaching			.30
*21.	Personal life goals and aspirations	.33		
*22.	Philosophical agreement with principal		.65	
27.	Family financial situation		-.24	-.28
30.	Interpersonal relationships with friends		.37	-.25
34.	Substance abuse by a family member		-.31	.20
*35.	Family expectations for time and priorities		-.21	.56
*40.	Assignment of teaching responsibilities	.26		
*42.	Need for community acceptance		-.35	
*43.	Principal's management style	-.34	.32	.48
*44.	Drive to fulfill personal needs	.30		
*47.	Financial loss	.21	.23	
51.	Need for security	-.30	-.22	

Function	Eigenvalue	% of Variance	Cum% of Variance	Canonical Correlation	P
1	.44	44.6	44.6	.55	.000
2	.25	25.7	70.3	.45	.000
3	.17	16.7	87.0	.38	.004

$omega^2$ = .53

Table 5 (continued)

Group Means	Function 1 (Personal Needs and Goals)	Function 2 (Acceptance by Adm. and Community)	Function 3 (Extrinsic Support Influences)
1 Preservice & Induction	.4	.6	-.4
2 Competency Building	.6	-.4	.2
3 Enthusiastic & Growing	-.0	.3	.3
4 Career Frustration	-.7	-.5	-.9
5 Stable & Stagnant	-.6	.6	-.7
6 Career Wind Down & Exit	.1	-.6	-.7

TABLE 6

Scheffe Pair-wise Comparisons of
Group Mean Discriminant Scores on Three Functions P/OII

*p< .05

Function I Means	Group	Personal Needs & Goals 5	4	6	3	1	2	df 5/475	F 13.5	prob. .00
- .7	5									
- .6	4									
- .0	6	*								
.1	3	*								
.4	1	*	*							
.6	2	*	*	*						

Function II Means	Group	Acceptance by Adm.& Community 4	6	5	2	3	1	df 5/475	F 13.7	prob. .00
- .6	4									
- .6	6									
- .5	5									
- .4	2									
.3	3	*	*	*	*					
.6	1	*	*	*	*					

Function III Means	Group	Extrinsic Support Influences 5	4	6	1	2	3	df 5/475	F 21.4	prob. .00
- .9	5									
- .7	4									
- .7	6									
- .4	1									
.2	2	*	*	*						
.3	3	*	*	*						

*Groups
1. Pre-Service and Induction
2. Competency Building
3. Enthusiastic and Growing
4. Stable and Stagnant
5. Career Frustration
6. Career Wind-Down and Exit

TABLE 7

Standardized Discriminant Function Coefficients
and Group Means for the Teacher Incentives Inventory

Item	Function	Incentives in Teaching I	Concrete Incentives II	Praise and Support Incentives III	Praise and Recognition IV
* 4.	Designation as master or lead teacher		.51	.34	
* 7.	Professional organization recognition or rewards		-.19	.40	
* 8.	Verbal praise from principal/supervisor				.81
* 9.	Written praise from principal/supervisor		.33	.31	-.35
*12.	Praise from students			-.49-	-.33
13.	Promotion to administrative position	-.38	-.23	-.45-	-.42
18.	Aide support	.29	-.36		
21.	Leadership opportunities		.28		.57
22.	Pleasant physical environment	-.26	-.43		-.31
23.	Mentor/master teacher role				
24.	Options for extra work in the summer	.42		.43	
25.	Options for extra work during the year			.30	
*27.	Early retirement options	-.41		.39	
28.	Longer day and/or year options (with additional pay)		.38	-.30	-.30
29.	Flexible work day (year)				.46
*32.	Educational loan forgiveness programs	.33	-.46	-.43	.44
33.	Paid sabbatical leaves	-.21	.25	-.20	.32
36.	Support for research and writing		-.23	.59	-.27
37.	Released time for professional activities	-.46			-.46
38.	Opportunities for professional advancement	.38	-.33		
39.	Job protection and security		.24		-.24
40.	Attractive insurance benefits				.36
*43.	Control of instructional decisions	.70		-.24	
44.	Influence in school decision making	-.25	.20		

*Univariate $p < .10$
Item 11 significant but removed during step analysis

$omega^2 = .45$

Function	Eigenvalue	% of Variance	Cum% of Variance	Canonical Correlation	P
1	.22	30.1	30.1	.43	.00
2	.18	23.9	54.0	.39	.00
3	.14	18.3	72.3	.35	.00
4	.12	16.4	88.8	.33	.01

Table 7 (continued)

Group Means	Incentives in Teaching F 1	Concrete Incentives F 2	Praise and Support Incentives F 3	Praise and Recognition F 4
1 Pre-Service-Induction	.7	.2	-.6	.3
2 Competency Building	.2	-.1	-.2	.4
3 Growing & Enthusiastic	.1	.0	.2	-.2
4 Stable & Stagnant	-.6	-.9	-.3	-.2
5 Career Frustration	-.6	-.1	.3	.5
6 Career Wind Down & Exit	-.6	.2	-.8	-.3

F-Function

TABLE 8

Scheffe Pair-wise Comparisons of Group Mean Discriminant Scores on Four Functions - TII

*p < .05

Function I Means	Group	Incentives in Teaching 6	5	4	3	2	1	df 5/479	F 12.2	prob. .00
- .6	6									
- .6	5									
- .6	4									
.1	3	*	*	*						
.2	2	*	*	*						
.7	1	*	*	*						

Function II Means	Group	Concrete Incentives 4	5	2	3	1	6	df 5/479	F 5.6	prob. .00
- .9	4									
- .1	5									
- .1	2	*								
- .1	3	*								
.0	1	*								
.2	6	*								

Function III Means	group	Praise & Support Incentives 6	1	4	2	3	5	df 5/479	F 9.9	prob. .00
- .8	6									
- .6	1									
- .3	4									
- .2	2									
.2	3	*	*							
.3	5	*	*							

Function IV Means	Group	Praise & Recognition 6	4	3	1	2	5	df 5/479	F 7.9	prob. .00
- .8	6									
- .6	4									
- .3	3									
- .2	1									
.2	2	*		*						
.3	5	*		*						

*Groups
1. Pre-service and Induction
2. Competency Building
3. Enthusiastic and Growing
4. Stable and Stagnant
5. Career Frustration
6. Career Wind-Down and Exit

TABLE 9

Results of Univariate ANOVA and Scheffe Tests
for PDDMI Items

	F	df	Sig. p	Group Mean Differences (p<.05)
1. University/college courses	5.99	5/455	.00	6<2, 4<2, 5<2, 3<2*
2. Workshops conducted by university/college personnel	5.74	5/457	.00	6<2, 5<2
6. Visitation of other classrooms within or outside of district	2.64	5/460	.02	6<2
7. Conference or convention attendance	3.93	5/458	.00	5<2
9. Non-teaching work experience	2.32	5/443	.04	N.S.D.
10. Regularly scheduled staff meetings	4.42	5/455	.00	4<2, 4<3
13. Exchange teaching - with teachers in different grades, schools, etc.	2.21	5/455	.05	N.S.D.

*Groups

1. Pre-service and Induction
2. Competency Building
3. Growing & Enthusiastic
4. Stable & stagnant
5. Career Frustration
6. Career Exit & Wind Down